Jundishapur J Chronic Dis Care. 2024 April; 13(2):e120635. https://doi.org/10.5812/jjcdc-120635.

Published online 2024 January 22. **Research Article**

Coping Strategies Among Family Caregivers of Patients with Chronic Mental Disorders: A Cross-Sectional Study

Arash Marzban [1], Malek Fereidooni-Moghadam [2,*] and Sima Ghezelbash [3]

[1]Department of Psychiatric Nursing, Isfahan University of Medical Sciences, Isfahan, Iran
[2]Community Based Psychiatric Care Research Center, School of Nursing and Midwifery, Shiraz University of Medical Sciences, Shiraz, Iran
[3]Department of Psychiatric Nursing, Faculty of Midwifery Nursing, Isfahan University of Medical Sciences, Isfahan, Iran

[*]*Corresponding author*: Community Based Psychiatric Care Research Center, School of Nursing and Midwifery, Shiraz University of Medical Sciences, Shiraz, Iran. Email: fereidooni_moghadam@yahoo.com

Received 2021 October 25; **Revised** 2023 December 24; **Accepted** 2023 December 29.

Abstract

Background: It is widely acknowledged that family caregivers of patients with chronic mental disorders face numerous challenges that can jeopardize their mental well-being. Therefore, the adoption of effective coping strategies can equip them to navigate the difficult and stressful situations encountered in their daily lives.
Objectives: The primary objective of this study was to assess the coping strategies employed by family caregivers of patients with chronic mental disorders who were receiving care at psychiatric centers in Isfahan, Iran.
Methods: This descriptive-analytical study involved 188 family caregivers of individuals with mental disorders selected through convenience sampling. Data were collected using a demographic characteristics form and the Endler and Parker Coping Inventory for Stressful Situations – Short Form (CISS-SF). The relationship between demographic variables and coping strategy scores was analyzed using independent *t*-tests, one-way analysis of variance (ANOVA), and Pearson and Spearman correlation tests in SPSS v. 20.
Results: The results revealed that 55.1% of family caregivers utilized emotion-oriented coping strategies, 30.3% employed problem-solving coping strategies, and 14.6% adopted avoidance coping strategies. Furthermore, there was no significant relationship between the types of coping strategies and any of the demographic variables ($P > 0.05$).
Conclusions: Given the findings of this study, which suggest that family caregivers tend to use ineffective coping strategies, it is imperative to implement preventive and psychological interventions aimed at enhancing the utilization of problem-oriented coping strategies within this group.

Keywords: Coping Strategies, Chronic Mental Disorder(s), Family Caregiver(s)

1. Background

Today, chronic mental disorders are recognized as one of the most significant global health issues (1). These disorders have far-reaching implications for health, quality of life, and the economic and social aspects of society, imposing substantial costs on healthcare systems worldwide (2, 3). Mental disorders also contribute to premature mortality (4), with an estimated 14.34% of global deaths attributed to mental disorders, accounting for approximately 8 million deaths annually. Consequently, mental disorders can be regarded as a major contributor to worldwide mortality (5). According to the Global Burden of Disease Report in 2017, approximately 971 million individuals worldwide are affected by mental illnesses to varying degrees, constituting 13% of the global population (6). Numerous studies conducted in Iran also highlight the escalating prevalence of mental disorders. For example, research by Taheri Mirghaed et al. estimated the prevalence of psychiatric disorders to be 30.03% based on screening tools and 25.42% based on clinical interviews (7). These increasing rates of mental disorders affect not only the individuals with the disorders but also their family members, exposing them to secondary stressors (8).

Family caregivers encompass relatives, friends, and even the friends of the patient who provide unpaid care for individuals with physical or mental disabilities at home, assisting them in their daily activities and aiding in their rehabilitation efforts (9). Often referred to as "latent

patients," these caregivers play a crucial role in reducing the frequency of patient readmissions (10). For instance, a study by Rodakowski et al. demonstrated that involving caregivers in discharge planning for the elderly led to a 25% and 24% reduction in readmissions within 90 and 180 days, respectively (11). However, due to the lack of adequate training for caregiving, family caregivers frequently experience significant adverse psychological effects (12) and grapple with various challenges in the psychological, social, and economic domains (13). Research indicates that family caregivers encounter numerous difficulties, including depression, anxiety, high levels of stress, reduced quality of life, increased burden, fatigue, sleep disturbances, memory and concentration issues, financial pressures, and interpersonal conflicts (14-16). Therefore, it is essential to comprehensively address the challenges faced by family caregivers to support and enhance their mental well-being (17). Numerous studies have identified various factors and interventions, including coping strategies, that can be effective in mitigating and managing caregiver stress and burden (18, 19).

Coping strategies refer to the methods, strategies, and approaches individuals employ when faced with stressful or unpleasant situations, with the aim of either effectively or ineffectively addressing those situations. These strategies encompass problem-oriented, emotion-oriented, and avoidance strategies. Problem-oriented coping involves focusing on problem-solving, while emotion-oriented coping entails addressing and reducing unpleasant emotions. Avoidant coping, on the other hand, seeks to evade the stressful situation altogether (20, 21). Research has consistently demonstrated that the effective use of coping strategies can reduce or eliminate stress (22), while ineffective coping strategies can exacerbate caregiver burden (23). Marimbe et al. have shown that family caregivers of individuals with mental illnesses often struggle to employ appropriate coping strategies when confronted with adverse circumstances (24). Furthermore, research conducted by Rahmani et al. in Iran revealed that family caregivers of patients with mental disorders tend to rely on maladaptive coping strategies, placing them at risk for mental health issues and increased stress levels. Hence, the importance of coping strategies and stress management cannot be overstated (25).

Research findings indicate that mentally healthy individuals are more likely to employ problem-oriented coping strategies and are less inclined to rely on emotion-oriented coping strategies (26, 27). Rahnama et al.'s study results also demonstrated that caregivers who utilized problem-oriented coping reported lower levels of anxiety (28). Given the significant role of effective coping strategies in enhancing mental health, reducing stress and anxiety, and addressing the various challenges faced by family caregivers (10), it is crucial to explore this psychological component and its related factors.

Numerous studies have highlighted the substantial and additional burdens that chronic mental disorders place on the healthcare systems of countries (29). Given the dearth of research in the field of family caregivers of patients with chronic mental disorders and the high prevalence of such disorders, conducting further studies across various domains is crucial. These studies can provide valuable insights and support to enhance the mental well-being of this population.

2. Objectives

The primary objective of this study was to investigate coping strategies among family caregivers of patients with chronic mental disorders. It is believed that assessing coping strategies among family caregivers of individuals with chronic mental disorders can inform the development and design of preventive programs aimed at preserving and improving the mental health of this population in Iran.

3. Methods

3.1. Research Method, Statistical Population, and Sample

This descriptive-analytical study was conducted among 188 family caregivers of patients with chronic mental disorders visiting Farabi and Khorshid psychiatric hospitals affiliated with Isfahan University of Medical Sciences. The data were collected over a 127-day period, and participants were selected using a convenient sampling method. Also, the sample size was determined (n = 157) based on the sample calculation formula as below for correlation studies, taking into account the correlation coefficient of 0.28 (r = 0.28), the power of 95% (β - 1), and the 95% confidence interval for type 1 error (= 0.05α). Finally, the sample size was determined as 188, assuming a 20% sample attrition rate (30).

$$n = \frac{\left(Z_{1-\frac{\alpha}{2}} + Z_{1-\beta}\right)^2}{\left[\frac{1}{2} ln\left(\frac{1+r}{1-r}\right)\right]^2}$$

Three participants who returned incomplete questionnaires were excluded from the study, leaving a final sample of 185 individuals for analysis. The inclusion criteria were as follows: (1) Willingness to cooperate and participate in the study; (2) literacy; (3) a minimum of 6 months of caregiving experience for a family member

with a chronic mental disorder; (4) no history of known chronic psychosis; (5) media literacy if data were collected online, including access to facilities such as smartphones and the internet; (6) no history of severe stress, such as the death of a loved one or divorce, and no history of caregiving for more than 1 patient in the last 6 months. Participants returning incomplete questionnaires were excluded based on the exclusion criteria.

3.2. Data Collection Method

Data collection took place in person at a predetermined location. All participants received a briefing on the research's design and objectives, as well as instructions on how to complete the questionnaires. They were also assured of the confidentiality of their information and provided informed consent. Subsequently, participants were given the questionnaires to complete independently. This process continued until all designated samples had completed the questionnaires. On average, participants required approximately 20 minutes to complete the questionnaires. Given that some family caregivers might have had difficulty understanding certain questions, the researcher read each question aloud and marked the chosen response selected by the family caregiver. It is worth noting that the data collection period spanned from February 7, 2021, to June 14, 2021, lasting for 127 days.

3.3. Ethical Considerations

This study adhered to the principles of the Declaration of Helsinki. Family caregivers were provided with a clear explanation of the study's objectives, and their informed written consent was obtained, ensuring the confidentiality of their data. The research protocol received approval from the Ethics Committee of Isfahan University of Medical Sciences under the ethics code IR.MUI.RESEARCH.REC.1399.701.

3.4. Measurement Tools

The data collection tools included a demographic characteristics form and the Endler and Parker Coping Inventory for Stressful Situations–Short Form (CISS-SF).

3.4.1. Demographic Characteristics Form

This form included the following characteristics: Age, sex of the caregiver, sex of the patient, marital status, number of family members, the patient's relative(s), educational level, diagnosis of the patient's disease, patient care and occupation, and whether they lived in a rural or urban setting. It also included information about the patient's history of hospitalizations due to illness.

3.4.2. Coping Inventory for Stressful Situations–Short Form

The questionnaire comprises 21 questions, with each question containing 5 response options (never, rarely, sometimes, often, very much) scored from 1 to 5, respectively. The coping strategy style is determined based on the average score obtained by a person from specific questions. Questions 1, 4, 7, 9, 15, 18, and 21 measure the avoidance coping style; questions 2, 6, 8, 11, 13, 16, and 19 measure the problem-based coping style; and questions 3, 5, 10, 12, 14, 17, and 20 measure the emotion-based coping style. A higher score in any of the 3 styles indicates the predominant coping strategy of an individual. The maximum score for each style is 35, and the minimum is 7. The questionnaire's validity and reliability have been previously confirmed in various studies (31, 32).

3.4.3. Data Analysis

Data analysis was conducted using SPSS v. 20 (IBM Corp., Armonk, NY, USA). Descriptive statistics, including frequency, percentage, mean, and standard deviation, were employed for the descriptive analysis. Inferential statistics, such as independent *t*-test, one-way analysis of variance (ANOVA), Pearson correlation coefficient, and Spearman correlation coefficient, were utilized for inferential analysis.

4. Results

4.1. Demographic Characteristics

The findings revealed that the mean age of family caregivers was 42.51 years with a standard deviation of 11.899, and the mean duration of the patient's diagnosis was 5.829 years with a standard deviation of 5.23. The majority of the participants were female (64.9%), married (68.65%), and homemakers (33.5%), with a secondary level of education (51.4%). Additionally, 33.5% of caregivers were homemakers, and 45.9% of their patients were diagnosed with bipolar disorder. Approximately 54.3% of patients had a history of hospitalizations fewer than 5 times. The most common relationship between caregivers and patients was that of mother and child (38.92%), and the majority of caregivers lived in urban areas (Table 1).

4.2. Coping Strategies

According to the findings, the mean scores for problem-oriented, emotion-oriented, and avoidance coping strategies were estimated to be 19.664 ± 7.426, 21.956 ± 6.207, and 18.297 ± 5.741, respectively (Table 2). Additionally, the findings indicated that 55.1% of family caregivers primarily used emotion-oriented coping strategies, 30.3% adopted problem-solving

Table 1. Frequency Distribution of Participants' Demographic Variables

Variables (Qualitative)	No. (%) or Mean ± SD
Caregiver's sex	
Male	65 (35.1)
Female	120 (64.9)
Marital status	
Single	58 (31.35)
Married	127 (68.65)
Relationship with the individual	
Father	22 (11.9)
Mother	72 (38.92)
Spouse	41 (22.16)
Sister	13 (7.03)
Brother	8 (4.32)
Cousins	23 (12.43)
Others	6 (3.24)
Patient's sex	
Male	109 (58.92)
Female	76 (41.08)
Educational level	
Secondary study	95 (51.4)
High school diploma or associate's degree	59 (31.9)
Bachelor's degree	24 (13)
Master's degree	6 (3.2)
PhD	1 (0.5)
Occupational status	
Self-employed	49 (26.5)
Registered civil servant	15 (8.1)
Unregistered clerk	19 (10.3)
Unemployed	23 (12.4)
Homemaker	62 (33.5)
Retired	17 (9.2)
Disease	
Depression	34 (18.4)
Bipolar	85 (45.9)
Schizophrenia	47 (25.4)
Schizoaffective	4 (2.2)
Others	15 (8.1)
Residential status	
Urban	160 (86.5)
Rural	25 (13.5)
Caregiver's age, y	
Under 21	18 ± 1
21 - 30	26 ± 3
31 - 40	36 ± 3
41 - 50	46 ± 3
51 - 60	55 ± 2
Higher than 60	63 ± 2
Number of family members	
Under 4	3 ± 1
4 - 6	5 ± 1
Higher than 6	8 ± 1
Caregiving period, mo	
Under 6	2.088 ± 1.443
6 - 10	6.926 ± 1.211
11 - 15	12.28 ± 1.370
16 - 20	16.571 ± 1.134
Higher than 20	27 ± 7.211
Frequency of hospitalizations due to the mental disorder, times	
Under 5	2 ± 1
5 - 10	6 ± 1
Higher than 10	12 ± 1

coping strategies, and 14.6% relied on avoidance coping strategies. Consequently, coping strategies were somewhat ineffective for 69.7% of the participants (Table 2).

4.3. Relationship Between Coping Strategies and Demographic Characteristics

It is worth noting that there was no significant relationship between any of the demographic characteristics and coping strategies ($P > 0.05$) (Table 3).

5. Discussion

The primary objective of this study was to identify the coping strategies employed by family caregivers of patients with chronic mental disorders. The findings revealed that 69.7% of participants' family caregivers utilized ineffective coping strategies, with 55.1% employing emotion-based coping strategies and 14.6% resorting to avoidance coping strategies. Conversely, 30.3% of caregivers employed effective coping strategies, namely problem-oriented strategies. It is worth noting that, unlike defense mechanisms, coping strategies typically involve a conscious and direct approach to addressing problems (33). This finding aligns with a study by Rahnama et al. titled "The Relationship between Anxiety and Coping Strategies in Family Caregivers of Patients with Trauma" (28). Additionally, Abbasi et al. found that the majority of family caregivers of cancer patients utilized emotion-based coping strategies (34).

The results of the present study also concur with studies conducted by Iavarone et al. (35), Sharif et al. (36), and Rahmani et al. (25). These studies collectively suggest that family caregivers of individuals with mental illnesses often struggle to apply appropriate coping strategies when confronted with challenges and stressful situations. However, Pompeo et al.'s research indicated that most family members of patients with mental disorders primarily employ social support and problem-based coping strategies, which contrasts with our findings (37).

Furthermore, Menati et al.'s study involving 103 caregivers of hemodialysis patients revealed that avoidance coping strategies were the most commonly employed coping strategies (19). The results of our study, however, were inconsistent with Sa'adati and Lashani's study (30) on students at the University of Social Welfare and Rehabilitation Sciences in Iran and Marimbe et al.'s study (24) on family caregivers of patients with mental disorders in Zimbabwe. It is important to note that

Table 2. Mean Scores and Frequency Distribution of the Underlying Coping Strategies

Coping Strategies	No.	Mean ± SD	Min	Max	No. (%)
Task-oriented coping strategy	185	19.664 ± 7.426	3	35	56 (30.3)
Emotion-oriented coping strategy	185	21.956 ± 6.207	6	34	102 (55.1)
Avoidance-oriented coping strategy	185	18.297 ± 5.741	6	33	27 (14.6)

Table 3. The Coping Inventory for Stressful Situations–Short Form (CISS-SF) Scores of Caregivers and Demographic Characteristics

Variables	Type of Coping Strategies					
	Avoidance-Oriented Coping Strategy		Emotion-Oriented Coping Strategy		Task-Oriented Coping Strategy	
	P-Value	Correlation Coefficients	P-Value	Correlation Coefficients	P-Value	Correlation Coefficients
Pearson's Correlation Coefficients						
Caregiver's age	0.962	-0.004	0.556	0.044	0.623	0.036
Number of family members	0.507	0.049	0.454	0.055	0.094	0.123
Caregiving period	0.583	0.041	0.194	0.096	0.554	-0.044
Frequency of hospitalizations due to mental disorder	0.831	-0.016	0.720	0.027	0.567	0.042
Spearman's Correlation Coefficients						
Educational level	0.408	0.061	0.649	0.034	0.053	0.142
independent *t*-test	p	t	p	t	p	t
Caregiver's sex	0.682	-0.410	0.707	-0.376	0.921	0.099
Marital status	0.360	-0.917	0.247	-1.163	0.664	0.435
Patient's sex	0.074	1.796	0.522	0.642	0.567	0.573
Residential status	0.697	0.390	0.255	1.141	0.673	0.422
One-way Analysis of Variance (ANOVA)	**P**	**F**	**P**	**F**	**P**	**F**
Disease	0.520	0.810	0.572	0.731	0.532	0.791
Occupational	0.819	0.441	0.354	1.116	0.756	0.526
Relationship with the individual	0.456	0.957	0.473	0.933	0.814	0.492

these discrepancies may arise from cultural differences, variations in research tools, and differences in sample characteristics used in assessing coping strategies.

Additionally, according to the findings of the present study, none of the coping strategy styles exhibited a significant relationship with demographic information. This finding was consistent with the results of Abbasi et al. and Pompeo et al.'s studies (34, 37). However, Sa'adati and Lashani's research on students at the University of Social Welfare and Rehabilitation Sciences demonstrated, unlike our study, a significant relationship between emotion-based coping strategies and sex (30). Furthermore, Rahmani et al. studied family caregivers of patients with schizophrenia and found that there was a relationship between coping strategies and certain demographic characteristics, including age, educational level, sex, occupational status, job loss due to caregiving responsibilities, perceived income adequacy, illness, and caregiving duration (25). This apparent discrepancy may be attributed to differences in research tools, samples, and research settings.

5.1. Limitations

The moods and sociocultural status of the participants when completing the questionnaires were considered limitations of this research.

5.2. Conclusions

In conclusion, the findings of this study suggest that a majority of family caregivers of patients with chronic mental disorders struggle to employ effective coping strategies. Therefore, the sensitive and challenging

situation of this group necessitates comprehensive screening programs to better understand their difficulties. It is essential to maintain social capital, vitality, and the well-being of these individuals and society through appropriate preventive measures. These results can be instrumental in shaping future plans to enhance the mental health of patients' family caregivers.

Acknowledgments

This article was part of a project approved by the Vice Chancellor for Research at Isfahan University of Medical Sciences. We extend our sincere gratitude to the Research Assistant for the financial support of this project and express our appreciation to all the participating family caregivers.

Footnotes

Authors' Contribution: All authors made substantial contributions to the research design, data acquisition, and analysis. They were involved in drafting the paper, approved the final version of the manuscript, and agreed to be accountable for addressing any questions regarding the accuracy or integrity of the work.

Conflict of Interests: There are no conflicts of interest among the authors.

Data Availability: The data presented in this study are openly available in a repository or will be accessible upon request from the corresponding author through a journal representative at any time during or after the submission and publication process. Any consequences related to potential withdrawal or future retraction will be the responsibility of the corresponding author.

Ethical Approval: The research protocol received approval from the ETHICS COMMITTEE of Isfahan University of Medical Sciences under the ethics code of IR.MUI.RESEARCH.REC.1399.701.

Funding/Support: This article was part of a project approved by the Vice Chancellor for Research at Isfahan University of Medical Sciences. The Research Assistant provided financial support for this project.

Informed Consent: The study's objectives were explained to family caregivers, and their informed written consent was obtained, guaranteeing the confidentiality of their data.

References

1. Rehm J, Shield KD. Global Burden of Disease and the Impact of Mental and Addictive Disorders. *Curr Psychiatry Rep*. 2019;**21**(2):10. [PubMed ID: 30729322]. https://doi.org/10.1007/s11920-019-0997-0.
2. Fekadu W, Mihiretu A, Craig TKJ, Fekadu A. Multidimensional impact of severe mental illness on family members: systematic review. *BMJ Open*. 2019;**9**(12). e032391. [PubMed ID: 31892656]. [PubMed Central ID: PMC6955519]. https://doi.org/10.1136/bmjopen-2019-032391.
3. Trautmann S, Rehm J, Wittchen HU. The economic costs of mental disorders: Do our societies react appropriately to the burden of mental disorders? *EMBO Rep*. 2016;**17**(9):1245–9. [PubMed ID: 27491723]. [PubMed Central ID: PMC5007565]. https://doi.org/10.15252/embr.201642951.
4. Plana-Ripoll O, Pedersen CB, Agerbo E, Holtz Y, Erlangsen A, Canudas-Romo V, et al. A comprehensive analysis of mortality-related health metrics associated with mental disorders: a nationwide, register-based cohort study. *Lancet*. 2019;**394**(10211):1827–35. [PubMed ID: 31668728]. https://doi.org/10.1016/S0140-6736(19)32316-5.
5. Walker ER, McGee RE, Druss BG. Mortality in mental disorders and global disease burden implications: a systematic review and meta-analysis. *JAMA Psychiatry*. 2015;**72**(4):334–41. [PubMed ID: 25671328]. [PubMed Central ID: PMC4461039]. https://doi.org/10.1001/jamapsychiatry.2014.2502.
6. G.B.D. Disease Injury Incidence Prevalence Collaborators. Global, regional, and national incidence, prevalence, and years lived with disability for 354 diseases and injuries for 195 countries and territories, 1990-2017: a systematic analysis for the Global Burden of Disease Study 2017. *Lancet*. 2018;**392**(10159):1789–858. [PubMed ID: 30496104]. [PubMed Central ID: PMC6227754]. https://doi.org/10.1016/S0140-6736(18)32279-7.
7. Taheri Mirghaed M, Gorji HA, Panahi S. Prevalence of psychiatric disorders in Iran: a systematic review and meta-analysis. *Int J Prev Med*. 2020;**11**. https://doi.org/10.4103/ijpvm.IJPVM_510_18.
8. Heydari M, Sh E, Masoudi REZA, Kheiri SOLEIMAN, Jivad NAHID. [The effect of family-centered care on the family caregivers' burden of patients with epilepsy]. *J Clin Nurs Midwifery*. 2018;**7**(2):146–57. Persian.
9. Institute of Medicine (US) Committee on the Future Health Care Workforce for Older Americans. *Retooling for an Aging America: Building the Health Care Workforce*. Washington DC, USA: National Academies Press; 2008. p. 1–300.
10. Akbari M, Alavi M, Irajpour A, Maghsoudi J. Challenges of Family Caregivers of Patients with Mental Disorders in Iran: A Narrative Review. *Iran J Nurs Midwifery Res*. 2018;**23**(5):329–37. [PubMed ID: 30186336]. [PubMed Central ID: PMC6111657]. https://doi.org/10.4103/ijnmr.IJNMR_122_17.
11. Rodakowski J, Rocco PB, Ortiz M, Folb B, Schulz R, Morton SC, et al. Caregiver Integration During Discharge Planning for Older Adults to Reduce Resource Use: A Metaanalysis. *J Am Geriatr Soc*. 2017;**65**(8):1748–55. [PubMed ID: 28369687]. [PubMed Central ID: PMC5555776]. https://doi.org/10.1111/jgs.14873.
12. Schulz R, Eden J. Family caregiving roles and impacts. *Families Caring for an Aging America*. National Academies Press; 2016. p. 73–122.
13. Kusi G, Boamah Mensah AB, Boamah Mensah K, Dzomeku VM, Apiribu F, Duodu PA, et al. The experiences of family caregivers living with breast cancer patients in low-and middle-income countries: a systematic review. *Syst Rev*. 2020;**9**(1):165. [PubMed ID: 32703259]. [PubMed Central ID: PMC7379811]. https://doi.org/10.1186/s13643-020-01408-4.
14. Kavi E, Bazrafshan M, Taleghani F, Abolhasani S, Akbari L. Experiences of Strokes' Caregivers: A Qualitative Study. *Jundishapur J Chron Dis Care*. 2019;**8**(4). https://doi.org/10.5812/jjcdc.90284.
15. *Common Caregiving Problems*. American Psychological Association; 2020, [cited 2021 Oct 13]. Available from: https://www.apa.org/pi/about/publications/caregivers/practice-settings/common-problems.

16. Rezaei H, Niksima SH, Ghanei Gheshlagh R. Burden of Care in Caregivers of Iranian patients with chronic disorders: a systematic review and meta-analysis. *Health Qual Life Outcomes*. 2020;**18**(1):261. [PubMed ID: 32746921]. [PubMed Central ID: PMC7398060]. https://doi.org/10.1186/s12955-020-01503-z.
17. Ntsayagae EI, Poggenpoel M, Myburgh C. Experiences of family caregivers of persons living with mental illness: A meta-synthesis. *Curationis*. 2019;**42**(1):e1–9. [PubMed ID: 31588764]. [PubMed Central ID: PMC6779982]. https://doi.org/10.4102/curationis.v42i1.1900.
18. *Tips for Coping with Stress|Publications|Violence Prevention|Injury Center|CDC [Internet]*. Centers for Disease Control and Prevention; 2020, [cited 2021 Oct 18]. Available from: https://www.cdc.gov/violenceprevention/about/copingwith-stresstips.html.
19. Menati L, Torabi Y, Andayeshgar B, Khatony A. The Relationship Between Care Burden and Coping Strategies in Caregivers of Hemodialysis Patients in Kermanshah, Iran. *Psychol Res Behav Manag*. 2020;**13**:133–40. [PubMed ID: 32104113]. [PubMed Central ID: PMC7008190]. https://doi.org/10.2147/PRBM.S233103.
20. Parker JD, Endler NS. Coping with coping assessment: A critical review. *Eur J Pers*. 2020;**6**(5):321–44. https://doi.org/10.1002/per.2410060502.
21. Stanislawski K. The Coping Circumplex Model: An Integrative Model of the Structure of Coping With Stress. *Front Psychol*. 2019;**10**:694. [PubMed ID: 31040802]. [PubMed Central ID: PMC6476932]. https://doi.org/10.3389/fpsyg.2019.00694.
22. Glazer S, Liu C. Work, Stress, Coping, and Stress Management. *Oxford Research Encyclopedia of Psychology*. Oxford University Press; 2017.
23. Monteiro AMF, Santos RL, Kimura N, Baptista MAT, Dourado MCN. Coping strategies among caregivers of people with Alzheimer disease: a systematic review. *Trends Psychiatry Psychother*. 2018;**40**(3):258–68. [PubMed ID: 30304119]. https://doi.org/10.1590/2237-6089-2017-0065.
24. Marimbe BD, Cowan F, Kajawu L, Muchirahondo F, Lund C. Perceived burden of care and reported coping strategies and needs for family caregivers of people with mental disorders in Zimbabwe. *Afr J Disabil*. 2016;**5**(1):209. [PubMed ID: 28730046]. [PubMed Central ID: PMC5433451]. https://doi.org/10.4102/ajod.v5i1.209.
25. Rahmani F, Ranjbar F, Hosseinzadeh M, Razavi SS, Dickens GL, Vahidi M. Coping strategies of family caregivers of patients with schizophrenia in Iran: A cross-sectional survey. *Int J Nurs Sci*. 2019;**6**(2):148–53. [PubMed ID: 31406884]. [PubMed Central ID: PMC6608655]. https://doi.org/10.1016/j.ijnss.2019.03.006.
26. Esmaeili Darmian M, Javadi SV. The Mediating Role of Stress-Coping Strategies on the Relationship between Thinking Styles and Mental Health of Nursing and Midwifery Students. *J Midwifery Reprod Health*. 2019;**7**(4):1964–71. https://doi.org/10.22038/jmrh.2019.39776.1444.
27. Tsaras K, Daglas A, Mitsi D, Papathanasiou IV, Tzavella F, Zyga S, et al. A cross-sectional study for the impact of coping strategies on mental health disorders among psychiatric nurses. *Health Psychol Res*. 2018;**6**(1):7466. [PubMed ID: 30596156]. [PubMed Central ID: PMC6247012]. https://doi.org/10.4081/hpr.2018.7466.
28. Rahnama M, Shahdadi H, Bagheri S, Moghadam MP, Absalan A. The Relationship between Anxiety and Coping Strategies in Family Caregivers of Patients with Trauma. *J Clin Diagn Res*. 2017;**11**(4):IC06–9. [PubMed ID: 28571166]. [PubMed Central ID: PMC5449812]. https://doi.org/10.7860/JCDR/2017/25951.9673.
29. Laszewska A, Wancata J, Jahn R, Simon J. The excess economic burden of mental disorders: findings from a cross-sectional prevalence survey in Austria. *Eur J Health Econ*. 2020;**21**(7):1075–89. [PubMed ID: 32458164]. [PubMed Central ID: PMC7423789]. https://doi.org/10.1007/s10198-020-01200-0.
30. Sa'adati H, Lashani L. [Spiritual Intelligence Relationship with Coping Strategies]. *Arch Rehabil*. 2012;**12**(0):75–81. Persian.
31. Boysan M. Validity of the Coping Inventory For Stressful Situations - Short Form (CISS-21) in a non-clinical Turkish sample. *Dusunen Adam*. 2012:101–7. https://doi.org/10.5350/dajpn2012250201.
32. Cohan SL, Jang KL, Stein MB. Confirmatory factor analysis of a short form of the Coping Inventory for Stressful Situations. *J Clin Psychol*. 2006;**62**(3):273–83. [PubMed ID: 16299755]. https://doi.org/10.1002/jclp.20211.
33. *APA Dictionary of Psychology - coping strategy*. American Psychological Association; 2020, [cited 2020 Oct 6]. Available from: https://dictionary.apa.org/coping-strategy.
34. Abbasi A, Shamsizadeh M, Asayesh H, Rahmani H, Hosseini SA, Talebi M. [The relationship between caregiver burden with coping strategies in Family caregivers of cancer patients]. *Iran J Psychiatr Nurs*. 2013;**1**(3):62–71. Persian.
35. Iavarone A, Ziello AR, Pastore F, Fasanaro AM, Poderico C. Caregiver burden and coping strategies in caregivers of patients with Alzheimer's disease. *Neuropsychiatr Dis Treat*. 2014;**10**:1407–13. [PubMed ID: 25114532]. [PubMed Central ID: PMC4122550]. https://doi.org/10.2147/NDT.S58063.
36. Sharif L, Basri S, Alsahafi F, Altaylouni M, Albugumi S, Banakhar M, et al. An Exploration of Family Caregiver Experiences of Burden and Coping While Caring for People with Mental Disorders in Saudi Arabia-A Qualitative Study. *Int J Environ Res Public Health*. 2020;**17**(17):1–15. [PubMed ID: 32887502]. [PubMed Central ID: PMC7504338]. https://doi.org/10.3390/ijerph17176405.
37. Pompeo DA, Carvalho A, Olive AM, Souza Mda G, Galera SA. Strategies for coping with family members of patients with mental disorders. *Rev Lat Am Enfermagem*. 2016;**24**(0). e2799. [PubMed ID: 27627121]. [PubMed Central ID: PMC5048725]. https://doi.org/10.1590/1518-8345.1311.2799.